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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,889	11/01/2000	Makoto Onozawa	122.1422	8796

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EXAMINER

ALPHONSE, FRITZ

ART UNIT PAPER NUMBER

2133

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,889

Applicant(s)

ONOZAWA ET AL.

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6, 8, 11, 12 and 19 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 7, 13-15, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14, 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

- 0.1 This office action is in response to amendment filed 12/27/2004.
- 0.2 Applicant (see Page 2 of claims) states "Please Cancel claims 1 and 9 and AMEND claims 1, 11 and 10..." This is not clear, it seems that applicant wants to cancel claims 16 and 9. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 1 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Particularly, claims 1 and 11 recite the limitations "the adjustment by said first phase adjustment circuit being independent of the adjustment by said second phase adjusting circuit." These limitations have nowhere been disclosed in the specification.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation “and a time difference between a turning on of the fourth output device of said respective X or Y sustaining circuit and turning on of the second output device thereof.” It is not clear as to what it meant by “second output device thereof.”

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 5, 6, 8, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. Pat. No. 6,211,867) in view of Tanaka (U.S. Pat. No. 5,438,290).

As to claims 1 and 11, Kim (fig. 1) shows a plasma display apparatus, comprising: a plasma display panel equipped with first electrodes (X) and second electrodes (Y1-Y480) arranged adjacently to each other, extending in a first direction, and address electrodes (150-1, 150-2) extending in a second direction at a right angle to the first direction; an X sustaining circuit (i.e., X-electrode driver 186) that supplies sustaining pulses to said first electrodes (X); a Y sustaining circuit (160) that supplies sustaining pulses to said second electrodes (Y1-Y480). Kim (figs. 1, 6) teaches about a path connected to a first or second electrodes and a high and a low potential power supply (col. 3, lines 66 through col. 4, line 14; col. 7, lines 66 through col. 7, line 10). Kim (fig. 4) teaches about adjustment of the power recovery circuit (col. 5, lines 15-53).

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Kim does not explicitly disclose a phase adjusting circuit that adjusts timing of a changing edge of a driving signal.

However, in the same field of endeavor, Tanaka discloses a phase adjustment circuit that adjusts timing of a changing edge of a driving circuit (fig. 9; col. 5, lines 47-51; col. 9, lines 61 through col. 10, line 9).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Kim's display apparatus with the low power driver circuit, as disclosed by Tanaka. Doing so would provide an energy recovery circuit free from any energy loss caused by a diode having a forward bias rising voltage and any unnecessary resistance or parasitic capacitance (col. 6, lines 42-47).

In addition, as to claims 1 and 11, Kim does not explicitly disclose the adjustment by the first phase adjustment circuit being independent of the adjustment by the second phase adjusting circuit.

However, this is obvious and very well known in the art as evidenced by (Flamm U.S. Pat. No. 6,858,112). See column 15, lines 47-56).

As to claim 2, Kim (figs. 1, 3) shows a plasma display apparatus, wherein the X sustaining circuit (186) and the Y sustaining circuit (160) include power recovery circuits each of which has a resonant circuit (see inductors L1 and L2 in figure 3) formed with a display capacitor of the plasma display panel, recovers energy when an application of the sustaining pulse is released and uses the recovered energy for, a next application of the sustaining pulses (col. 3, lines 56 through col. 5, line 14).

As to claim 5, Kim (figs. 1, 2) shows a plasma display apparatus, wherein the plasma display panel forms a first display line between one side of one of the second

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electrodes and one adjacent electrode of the first electrodes, a second display line between another side of the one second electrode and another adjacent electrode of the first electrodes (note the plurality of display lines in figure 1 of the PDP), and forms a display field of a frame by plural subfields, and provides a gray scale by combining said subfields selectively for display (note in figure 2, the plurality of subfields per period in each field). Kim teaches about X and Y sustaining circuits that supply the sustaining pulse to an odd-numbered electrode of the first electrodes, and X and Y sustaining circuits that supplies the sustaining pulse to an even-numbered electrode of the first electrodes (col. 3, lines 47-65).

As to claims 6, 8 and 12, the claims have substantially the limitations of claim 1. Therefore, they are analyzed as previously discussed in claim 1 above.

Allowable Subject Matter

7. Claims 3-4, 7, 13-15 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 10 is allowable. Claim 19 would be allowable once overcome the 112 rejection.

Response to Arguments

8. Applicant's arguments with respect to claims 1-8, 10-15 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

Or faxed to: (703) 872-9306 for all formal communications.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fritz Alphonse

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April 14, 2005



GUY LAMARRE
PRIMARY EXAMINER